

An

# Inaugural Thesis

on  
Intermittent Fever.

By

John Batte

of Virginia.

February 20<sup>th</sup>, 1828.

Wm. Lloyd Garrison

Dear Sir

or

Antislavery Office

of

John Ball

of

February 25. 1838.

# Intermittent Fever

*General Character.* This disease consists of a succession of febrile paroxysms; usually commencing with chills, and generally terminating in profuse perspiration, with intermissions or intervals longer or shorter according to the nature of the case, and the plan of treatment pursued in each; and is named according to the particular type it assumes or is made to assume.

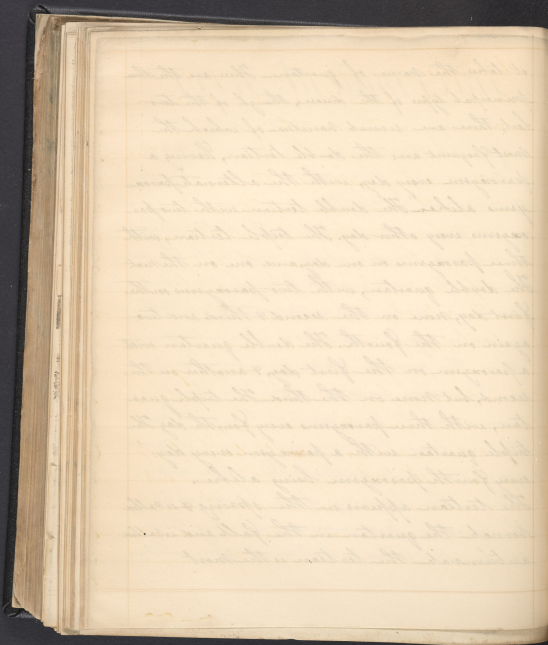
When the paroxysm occurs once every twenty four hours, every paroxysm being similar, the disease is said to have assumed the quotidian type and from that circumstance it is named a quotidian intermittent. If 48 hours elapse between the beginning of one paroxysm and the paroxysm next succeeding (the two being similar) it is called a tertian - & 72 hours elapse,

Intermittent Fever

General character: The fever consists of  
a succession of slight febrile paroxysms  
beginning with chill and usually terminat-  
ing in profuse perspiration, with intermissions  
of several hours or days according to the  
type of the case and the force of treatment.  
Frequent in early and a chronic tendency to the  
intermittent type of disease in a third of cases.  
When the paroxysms occur very frequent  
and brief paroxysms may sometimes  
occur a week to four times the frequency  
of the fever that characterizes it. It is  
a disease intermittent of its paroxysms  
the beginning of the paroxysm and  
the paroxysm that constitutes the fever  
the disease is called a tertian or quartan fever.



it takes the name of quartan. There are the three principal types of the disease, though of the two last, there are several varieties of which the most frequent are: the double tertian, having a paroxysm every day, with the alternate paroxysms alike. The double tertian with two paroxysms every other day. The triple tertian, with three paroxysms on one day, and one on the next. The double quartan, with two paroxysms on the first day, none on the second & third, and two again on the fourth. The double quartan with a paroxysm on the first day, & another on the second, but none on the third. The triple quartan, with three paroxysms every fourth day. The triple quartan with a paroxysm every day: every fourth paroxysm being alike. The tertian appears in the spring & is called vernal. The quartan in the fall and is called autumnal. The tertian is the most



inflammatory and frequent form & most easily cured  
- The quotidian next - the quartan is the most rare  
in occurrence & the most obstinate. The quotidian  
makes its appearance in the morning. The tertian  
at noon; and the quartan in the evening - the  
tertian is the most frequent - the quotidian  
next & the quartan least frequent. A paroxysm  
of intermittent is divided into three stages  
or stages, to wit: the cold, hot, and sweating sta-  
ges - The cold stage commences with languor,  
sluggishness of motion, debility, yawning, stretch-  
ing & aversion to food - The face becomes pale,  
the features shrink, the bulk of every external  
part is diminished & the skin is covered with  
cutis anserina and appears constricted as if cold  
had been applied - At length the patient feels  
cold & universal rigors come on, with pain in  
the head, loins, and extremities - The respiration  
is short, hurried and anxious - The urine is



47  
almost colourless, & small in quantity, the sensibility  
is greatly impaired; and the pulse small, frequent, and  
often irregular. In some instances swoonings and stu-  
por have obtained to such a degree as to amount  
almost to apoplexy. These symptoms having continued  
for one or two hours, gradually abate—being followed  
immediately by the hot stage, which is evinced  
by the following symptoms, to wit: increased  
heat over the whole superficies of the body,  
the face becomes flushed, the skin dry, thirst  
considerable, pain in the head and limbs, throbbing  
of the temporal arteries; anxiety & rest-  
lessness—the respiration is fuller and more free,  
but still frequent—the tongue is furred, the  
pulse has become more regular, hard & full &  
sometimes delirium arises. The symptoms of the  
hot as well as the cold stage, having continued  
for some time, a moisture breaks out upon  
the forehead and by degrees becomes general—



The heat and Thirst gradually abate. The urine deposits a laticitious sediment, respiration becomes free and full, & the pulse slow, soft, and regular, and the function of the lungs, stomach, skin and other parts are apparently restored from their abnormal to their normal state; until the next period of attack. When the cause of the disease existing, we have presented to our view; the same or nearly the same train of symptoms, modified by the circumstances of the case or the means employed for the patient's relief. Yet there are some anomalies that should not be overlooked; namely that some paroxysms are not ushered in by a cold stage, & that others have not been accompanied by the hot. We are further informed by Jackson that the paroxysm of an intermittent fever has gone off by a copious discharge of urine and alvine evacuations; without any perspiration. Another anomaly





in this disease is, that it sometimes though rarely,  
locates itself in some particular part of the body;  
For instance— an extremity has been known to  
go through all the stages of a paroxysm; the  
rest of the body remaining free from the attack.  
The Causes of this disease are the following viz:  
Marsh Miasmata (called by the Italians. malarial)  
is the principal cause— Cold combined with  
Moisture is likewise a powerful agent in the  
production of this disease— Mental anxiety,  
abstemious diet, excessive evacuations, and what-  
ever debilitates the system to a great degree  
may be enumerated among the causes of this  
complaint—

Treatment. This is divided into two periods  
as applied during the paroxysm or palliative  
and that during the apyrexia or curative.  
During the paroxysm the physicians object



should be to hasten its different stages or stages  
and to relieve urgent symptoms—To effect this,  
if the physician were called to a patient  
during the cold stage—He would direct him  
to be put to bed and warmly covered and have  
bricks heated and reduced to a proper tempera-  
ture by immersing them in cold water or  
vinegar, or a mixture of the two, and afterwards  
have them wrapped up in suitable cloths  
and applied to the patient's feet & if required  
to other parts of the body—He would also  
order his patient warm drinks; such as: Cha-  
monilla tea, warm balm tea or capatorium  
(perfoliatum) tea; if stimulants are required,  
a little wine or whey may be given &c.

Opium is a very good remedy to relieve urgent  
symptoms and check the progress of the  
disease—To this fact I can afford some tes-  
timony—Whilst I was a student of Medicine



under the late Dr. Green Th. Batten, he was accustomed to give his patients upon the slightest premonition of an attack, a dose of doan's powder, which not unfrequently prevented the paroxysm, and when it did not, it relieved very much the distressing symptoms, and was so effectual in giving relief that it received from the vulgar in the vicinity the name of ague powder & they reposed such confidence in it, that they carried some of the powder with them on their journeys (as they lived in a miasmatic country) to ward off an attack. The practice of giving opium in this disease, originated with Dr. Trotter, who says that if 20 or 30 grs of the tincture of opium be given at the commencement of the cold stage it will check the progress of the paroxysm altogether. It may be carried to a greater amount if circumstances require it. An emetic given an hour



Before the period of accession, frequently prevents its recurrence and sometimes completely eradicates the disease when given in its commencement. The best emetic that I have ever seen used in this disease, is the following: *pulvis ipecacuanha* ℥i. *Tartar. Antimonii* et *Potassa* gr. ss. *Agua Fontis* ℥viii.

Misceri. The dose is a tablespoonful every ten or fifteen minutes until it operates, when it is immediately to be discontinued & its emetic effects to be promoted by tepid water. The pediluvium is also very good in this stage — so is the application of tourniquets on the extremities of opposite sides, as for example: to the upper part of the arm on the one side & the superior part of thigh on the other. The physician would prevent the cold stage if in his power, if not, he would direct his remedies so as to mitigate the symptoms & obviate the effects of the disease & hasten the hot stage, which is the





sequel of the cold. The hot being formed, the physician should direct his remedies to it and attend to the indications to be fulfilled, which are to quiet irritation—prevent inflammation and promote perspiration. The first indication may be answered by an emetic, when ~~emesis~~ does not occur spontaneously. When the latter prevails, all the physician would do at that time, would be to assist nature: by copious drinks of sage, chamomile, or balm tea. The second indication is to be fulfilled by bleeding the patient. & the third is to be answered by the use of some of the following diaphoretics.

The best for this purpose is the acetate of ammonia, in the dose of  $\text{ʒjss}$  every half hour, or ten grains of salt of tartar in a table spoonful of vinegar at the same intervals; ten grs of nitre with one sixth of a grain of tartar emetic, or a grain of ipecacuanha, will answer, with tepid diluent drinks, as warm



Chamomile, or eupatorium (perfoliatum) tea; lemon-ade; a drink acidulated with elixer of vitriol; or barley water with vinegar, vinegar whey; a solution of nitre in the proportion of ℥j. to the pint of linseed tea or gum arabic solution. Opium is highly recommended in this stage by Dr. Lind. Injurious in intermittents of a marked phlogistic character; highly useful in cases of febrile reaction. Small draughts of cold water, where the skin is very dry and hot are both grateful & beneficial; predisposing to perspiration. Sponging the whole surface of the body with cold water or with vinegar adds much to the patient's comfort, when labouring under a high fever. This is the ordinary treatment of intermittents during the hot stage. — But when they are accompanied by inflammatory symptoms; the treatment is somewhat different. In the spring they are more or less inflammatory,



12  
and also during the prevalence of an inflammatory epidemic. — There is no difficulty in detecting this form of the disease by the symptoms which attend. — They are a full, hard, and strong pulse, laborious respiration, severe local pains in the head and heart. — The treatment in this case <sup>consists</sup> of copious venesection during the paroxysm; followed by emetics, mercurial purges and mild diaphoretics, such as the aforementioned.

In the sweating stage very little need be done, unless very profuse perspiration comes on, and is likely to injure the patient.

In this case, the patient should be supported by stimulents, such as; a large blister over the epigastric region & sponging the body all over with a solution of alum & spirits.

The next is the treatment during the apyrexia; which should be commenced with the



13  
peruvian bark; where the system has been pre-  
pariously prepared by emetics, bloodletting, both ge-  
neral and local if required, diaphoretics &c. If  
the bowels be costive, they should be moved by  
some mild purgative; such as calomel or the  
extract of butter-nut or the powder of the May-  
apple, the last of the three is a most excellent  
and very mild purgative; and from numerous  
experiments made on myself and others with  
that article, I am induced to believe that  
its effects on the system as a purgative Medi-  
cine are equal to those produced by rhubarb  
or the butter-nut: possessing over them the  
advantage that Desaults apparatus pos-  
sesses over all others; namely it can be pre-  
pared by a very little trouble; as it grows in  
almost every part of the United States &  
exists in the greatest abundance. It may be  
compounded with calomel, rhubarb, butter-nut





and other substances. The following is a most excellent purgative Medicine in this disease; *Sulphuris* ℥i. *Magnesia* ℥i. To be mixed in a little sweet milk for a dose. *Cinchona* in some of its Forms is by far the most powerful tonic Febrifuge that physicians possess; and I will venture to say that we may almost regard it as a specific in the mildest Forms of this disease, and I have also witnessed its good effects in several inveterate cases. If we wish to obtain its best effects, we should attend particularly to the state of the patients system and not administer it when the phlogistic diathesis prevails to a considerable degree, unless the urgency of the case should require its immediate exhibition, under such circumstances it would occur to the physician to administer the bark and hold a kind of truce with the disease, until he could make



an impression on the disease & help the vis medicatrix naturae out of some of her difficulties, by attending to and fulfilling the several indications as they present themselves, at the same time supporting the patients system.

Authors express contradictory opinions with regard to the use of purgatives & emetics as preparatory measures to the employment of the Cinchona.

What I saw in the private practice of my preceptor in the early part of my medical career, impressed on my mind the importance of preliminary measures and the following, was the sum of my reflections: that, notwithstanding a cure may be effected in many cases of the disease without them in less time, it is the safer practice, where the patient is of a robust habit and his bowels costive or where we have any reason to suspect organic derangement of the liver, spleen, kidneys or



76  
or other parts; as we should by delay, suffer the time  
for the use of such Measures to pass by without  
doing that, which we ought to have done; For it is a-  
greed by most Medical writers, that the Com-  
mencement of the disease is the proper time  
when the system can bear their operation.  
The existence of visceral obstructions also  
forms an objection to the use of the bark.  
In such a case a mild Mercurial Course  
must be preceded or the bark may be gi-  
ven in conjunction with Mercury.

From an ounce to an ounce & a half of the for-  
mula may be given per diem, in some cases. Then  
it purges opium or Kino may be given.  
When much acidity exists in the prima  
via, it may be combined with an alkali.  
The bark when rejected by the stomach  
may be combined with aromatics; such as:  
serpentaria, cloves, black pepper, Capsicum &c.



If the stomach should reject the bark time after time, or not be able to bear it from any circumstance, it may be administered per-rectum, and in the case of children; it may be applied in the form of the bark jacket. The sulphate of quinine is a most valuable preparation of cinchona; given in doses of from one to three grains, every hour or two more or less. Should it purge opium may be given in combination with it.

A variety of other vegetable tonics have been given in this disease, such as the *Prunus virginiana*, *Cornus Florida et sericea*, the *Liliodendron tulipifera*, *Aristolochia serpentaria*, the bark of the different species of oak and willow, Horse Chestnut &c. strong Coffee has been recommended. The *tela asaneorum* a very efficacious remedy. Many other remedies have been used in this





disease as: the white oxide of arsenic, Cuprum ammoniacum, Oleum Terebinthina, sulphas cupri, sulphas Zinc, Mustard, carbonate of ammonia, Camphor, the alkalies, Cinnamon / Fowler's solution of arsenic &c &c.

These tonics and stimulants are particularly useful when age, debility, a damp situation or a rainy season give the disease a more obstinate character. I have witnessed the good effects produced by a compound of Cinchona and serpentaria in the proportion of  $\text{ʒi.}$  of the former to  $\text{ʒss.}$  of the latter given in substance.

Lind speaks highly of  $\text{ʒss.}$  of alum, ten of nutmeg & ten of extract of bark, given twice a day. Five grains of Camphor with a drachm of the bark or three grains of the Carbonate of ammonia with the same quantity, or a grain of opium may



77  
be given when the system requires support,  
the habit phlegmatic, and in quartans.

When cough is combined with ague, blisters  
to the breast, emulsion, linseed tea, deco-  
ctions of Mallows; mucilage of gum arabic,  
syrups, with nitre &c may be resorted to.  
Costiveness or brown, black, or bilious stools  
indicate the combination of purgatives  
emetics & diluents. Dr. John Bell, of this city,  
informed the Class of the Medical Institute  
that a patient of his who had taken most  
of the tonic Medicines prescribed in in-  
termittents previous to the necessary depletion  
by the lancet and purgatives with little  
or no effect; was cured in a short time by  
depletion by the lancet and purgatives & then  
giving him the reputed remedies; which shows  
the importance of the physicians attention  
to the state of his patients system in this as



well as in all other diseases. Other remedies have been used in this disease, such as: Horson, large doses of opium and an alterative course of Mercury. The whole of the antiphlogistic system should be strictly enjoined. This system consists in the employment of cool air, in the summer; and a graduated temperature in the winter, a well ventilated room, the avoidance of all impressions upon the senses, both external & internal, the exercise of the body and mind, the taking in of aliments, ~~but~~ The diet should be light & consist of some of the following articles, to wit: toast-water, lemonade, luscious tea, barley water with other similar articles, as, a solution of gum-arabic, apple water, Currant jelly dissolved in water &c. Where there is great thirst, acidulated drinks should be used. Cleanliness is to be attended to throughout the complaint.

Blisters do most good in this as well as in most other diseases; after the phlogistic diathesis



has been greatly reduced or completely subduced;  
 therefore their use should be held in reserve  
 until the system is prepared; and in cases of local  
 pains as a general rule their use should be  
 preceded by cups or leeches, or both; their action  
 may be accelerated by previously applying rubi-  
 facients to the parts.

## Required Intermittent Fever

Induced by

the use of the

of the

the

the

the

the

the

the

the

the

the

